Asphalt
Technology
Division



Maryland Specification Updates



- Section 901
- MSMT 416
- MSMT 735
- MSMT 412
- Binder Designation



These Three Documents Work in Unison



This procedure is used to determine the required proportions of aggregates from two or more sources needed to meet the minimum dynamic friction value requirements for surface mixes. The values obtained from this procedure are used to predict the frictional properties of a combination of aggregates

MSMT 416 - Table 901D - Aggregate Bulletin



Maryland State Highway Administration Office of Materials Technology Aggregate Bulletin **Test Data**

AGGREGATE PHYSICAL PROPERTY REQUIREMENTS FOR ASPHALT MIXES

MATERIAL	S P E C I F I C A T I O N	TEST METHOD					
		T11	T 96	T 104	D 4791	MSMT 216	T 279
		MATERIAL FINER THAN No.200 SIEVE	LOS ANGELES ABRASION (LA)	SODIUM SULFATE SOUNDNESS	FLAT and ELONGATED (a)	DYNAMIC FRICTION VALUE (DFV) (b) (c)	BRITISH PENDULUM NUMBER (BPN) (c)
		% max	% max	% max	% max	min	MIE
SURFACE COURSE 4.75mm, 9.5mm, 12.5mm, and 19.0mm	M323	-	45	12	10	25	-
SURFACE COURSE — HIGH DFV 4.75mm, 9.5mm, 12.5mm, and 19.0mm	M323	-	45	12	10	40 (e)	-
BASE COURSE 19.0mm, 25.0mm and 37.5mm	M323	-	45	12	10	-	-
GAP GRADED STONE MATRIX ASPHALT 9.5mm, 12.5mm, and 19.0mm	M323	-	30	12	20/5 (g)	40 (e)	-
OPEN GRADED FRICTION COURSE 9.5 mm, 12.5 mm, 12.5 mm PEM (b)	MSMT 409	0.5	30	12	20/5 (g)	40 (a)	-
SLURRY SEAL (SS) and MICRO-SURFACING (AIS)	-	-	-	12	-	40 (1)	30
CHIP SEAL SURFACE TREATMENT	M 80, CLASS A	1.0 (d)	45	-	-	-	-



Dynamic Friction Values have

Changed



Section 901 Table D

Asphalt Mix Aggregate Requirement	Dynamic Friction Value Minimum		
High DFV	40		
Non-High DFV	25		



MSMT 416 Dynamic Friction Value Categories

Category	DFV
HDFV I	50
HDFV II	45
HDFV III	40
SDFV IV	30
SDFV V	25
LDFV VI	20



MSMT 735 – Quality Level Analysis

- Mix Pay Factor Analysis
- Mix Verification Analysis



MSMT 735 – Mix Pay Factor Analysis

- Less than 3 QA Samples combine with previous mix lot (Compute T and F, Compute PWSL)
- Less than 3 QA Samples with no previous mix lot
 - Total QA and QC results greater than 3
 (No T and F, Compute PWSL)
 - Total QA and QC results less than 3 (No T and F, No PWSL, Pay Factor = 100)



MSMT 735 – Mix Verification Analysis

- Split Samples
- Compare Test Results

AASHTO Multi Lab Precision				
Compare	Do Not Compare			
Producer Data	SHA Data			

Determine PWSL for Mix Properties



Mixes with High ABR 2015 Production

18 % of Mixes

39 % of Plants



MSMT 412 – RAP/RAS Design

RAP or RAS Stockpile Evaluation Required

- Samples split with Administration
- Weekly
 Gmm, AC, Gradation
- Quarterly (Only when blending charts are required)
 April, July, September
 Additional tests for binder properties



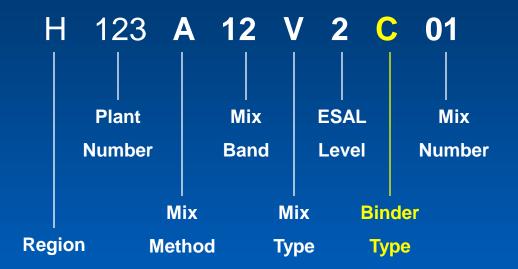
Binder Type Selection

Based on Climate

• Based on Traffic



Binder Type

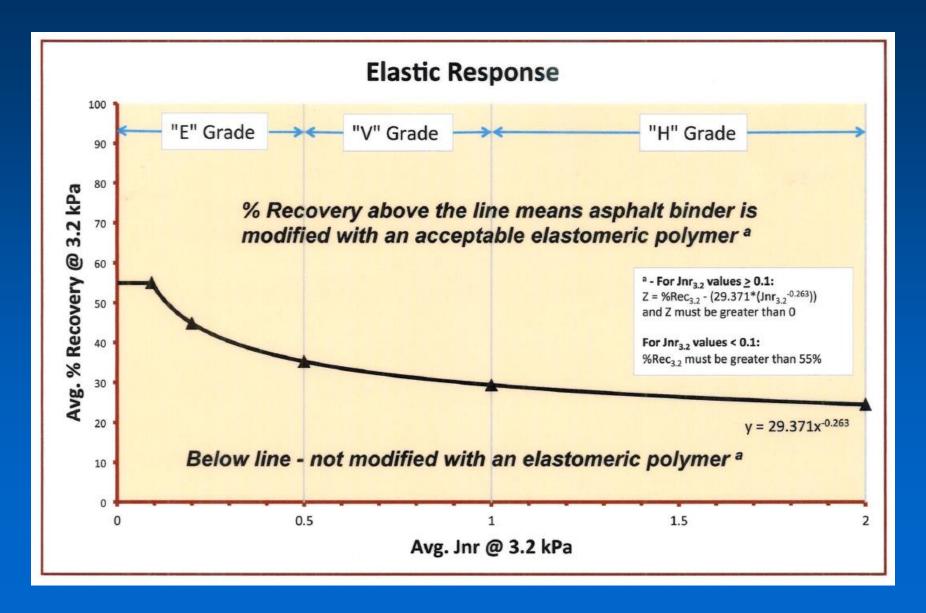


A 58S-22 [58-22] B 58S-28 [58-28] C 64S-22 [64-22] D 64S-28 [64-28]

E 64H-22 [70-22] F 64E-22 [76-22] G 76E-28 [High Poly]

K CSS1H L CQS1H M CRS2P N CRS2L





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Questions?